

What is claimed is:

1. A method of manufacturing a heat exchanging fin having an oval collared through-hole,

comprising the steps of:

forming a circular projected section, whose transverse sectional shape is a circular shape, in a thin metal plate;

drawing said circular projected section a plurality of times so as to form into an oval projected section, whose transverse sectional shape is an oval shape and which has a prescribed height, a prescribed major axis and a prescribed minor axis; and

boring a through-hole in said oval projected section so as to form said collared through-hole.

2. The method according to claim 1,

wherein a ratio of the major axis of said oval projected section to the minor axis thereof is gradually increased in said drawing steps.

3. The method according to claim 1,

wherein reduction of the minor axis of said oval projected section is greater than that of the major axis thereof in each of said drawing steps.

4. The method according to claim 1,

wherein a drawing rate at both ends of the minor axis of said oval projected section is equal to that of the major axis thereof in each of said drawing steps.

5. A die set for manufacturing a heat exchanging fin having an oval collared through-hole,

comprising:
an upper base;
a lower base relatively moving close to and away from said upper base;
a circular drawing die having a circular transverse sectional shape,
said circular drawing die being provided to one of said bases;
a circular drawing punch having a circular transverse sectional shape,
said circular drawing punch being provided to the other of said bases and
capable of entering said circular drawing die so as to form a circular
projected section in a thin metal plate;
a plurality of oval drawing dies having oval transverse sectional
shapes, said oval drawing dies being provided to one of said bases;
a plurality of oval drawing punches having oval transverse sectional
shapes, said oval drawing punches being provided to the other of said bases
and capable of entering said corresponded oval drawing dies so as to reduce
a width of the circular projected section and form the circular projected
section into an oval projected section having a prescribed height; and
a pierce punch being provided to one of said bases so as to form the
oval projected section into the oval collared through-hole,
wherein said oval drawing dies and said oval drawing punches are
arranged so as to reduce a major axis and a minor axis of the oval projected
section with advancing the steps of forming the oval projected section.

6. The die set according to claim 5,

wherein said oval drawing dies and said oval drawing punches are
arranged so as to gradually increase a ratio of the major axis of the oval
projected section to the minor axis thereof with advancing the steps of
forming the oval projected section.

7. The die set according to claim 5,

wherein said oval drawing dies and said oval drawing punches are designed so as to make reduction of the minor axis of said oval projected section greater than that of the major axis thereof.

8. The die set according to claim 5,

wherein said oval drawing dies and said oval drawing punches are designed so as to make a drawing rate at both ends of the minor axis of said oval projected section equal to that of the major axis thereof.